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THE UNIVERSITY OF ALBERTA
AN EXPERIMENTAL INVESTIGATION OF RATIONAL-EMOTIVE
PSYCHOTHERAPY WITH CHILDREN

by

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A Thesis

Submitted to the Faculty of Graduate Studies

In Partial Fulfillment of the Requirements for the Degree of
Master of Education

Department of Educational Psychology
Edmonton, Alberta

July, 1965

UNIVERSITY OF ALBERTA
FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and
recommend to the Faculty of Graduate Studies for acceptance,
a thesis entitled, "An Experimental Investigation of Rational-
Emotive Psychotherapy With Children," submitted by Edward
Owen Marcum in partial fulfillment of the requirements for
the degree of Master of Education.

ABSTRACT

The purpose of this study was to investigate one of the many theoretical methods of helping emotionally handicapped students; in particular, to study the effectiveness of Albert Ellis's Rational-Emotive psychotherapeutic counselling on elementary school children.

A screening device, A Process For In School Screening of Children With Emotional Handicaps by Bower (1962) was administered to the one hundred sixty-four students in the five division two classes of an urban school. The thirty-three students screened by the tests as being the most poorly adjusted students were randomly assigned to a control and an experimental group. The experimental group was counselled with rational-emotive psychotherapy as outlined by Albert Ellis (1962). Rational-emotive counselling attempts to ameliorate an individual's emotional maladjustments by replacing the irrational, illogical covert self verbalizations, which caused the maladjustments, with more rational, self-enhancing, logical self-verbalizations. At the conclusion of the counselling sessions the screening tests were readministered to all of the one hundred sixty-four students in the division two classes.

The statistical tests applied to the resultant data failed to indicate any significant changes in the experimental group. The treatment therefore, as measured by the testing devices used, failed

to yeild the effects postulated by the hypotheses.

However, a number of factors became evident which would caution the hasty rejection of rational-emotive psychotherapy. A number of possible explanations were posed for this absence of any statistical differences between the two groups.

ACKNOWLEDGEMENTS

The writer wishes to thank his supervisor, Dr. C.M. Christensen, for his continued encouragement, interest and advice which was so willingly given throughout this study.

Appreciation is also expressed to the other members of the committee, Dr. R.S. MacArthur, Dr. E.W. Buxton, and Dr. P.P. Rempel.

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CHAPTER I

INTRODUCTION

Children suffering physical or mental handicaps have had their needs recognized. Their identification is relatively simple and adjustments have and are being made to ensure their maximum educational growth.

Such is not the case, however, with children experiencing emotional handicaps. These children present a much more difficult problem in respect to their identification and remediation. While many and varied techniques have been tried, at the present time, the school has no rapid, reliable and economical method of either identifying or assisting children with moderate or severe emotional handicaps.

Studies of the incidence of emotionally handicapped children in the schools highlight the extent of the problem. A study by the California State Department of Education (Bower 1958), involving children in the 4th, 5th, and 6th grades, found approximately ten percent of the group to be from moderately to seriously handicapped emotionally. Wall (1952) summarized eight investigations in which the incidence of seriously disturbed children in school ranged from 4 percent to 12 percent. A study by Ullmann (1952) found approximately 8 percent of 9th grade pupils to be seriously maladjusted. These studies indicate an average of approximately 10 percent of the school

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population to be emotionally handicapped. At the same rate this would indicate approximately eight thousand nine hundred Alberta students in grades four, five, and six to be handicapped emotionally.

Provisions for the treatment of emotionally handicapped elementary students in Alberta schools is all but non-existent. In 1962 there were four adaptation classes, with an enrolment of forty-five children for all the province of Alberta (Annual Report Department of Education, 1962, p. 73). This represents less than one half of one percent of the estimated emotionally handicapped students in grades four, five, and six in Alberta schools.

In Alberta, elementary school children are not provided with the counselling services provided for older students. Royal Commission (1959) stated that there were no guidance counsellors in the elementary schools of Alberta. Similarly Department of Education of Alberta Annual Report (1963) concluded that: "...guidance services for students experiencing social and emotional problems were generally recognized as inadequate." (p. 18).

Experts have also stressed the need for the identification and remediation of emotional handicaps at an early age. Lambert (1961), for example, concluded that: "... early identification is a prerequisite to helping children who are handicapped by, or vulnerable to emotional disorders... The earlier a developing emotional problem can be detected, the more economically and effectively it can be

arrested. The younger a child is the more amenable to change are his personality and outlook on life." (p. 8). In a similar vein Harms (1963) stated: "...guidance, to be effective, must begin as early as possible in the pupil's school life and... maladjustments often may be prevented by early identification of pupils with emotional and social, as well as learning problems." (p. 82).

One factor contributing to this lack of counselling services for the emotionally handicapped elementary school children may be the absence of a theory or a rationale of a counselling procedure which is capable of being carried out by school personnel.

The purpose of this study was to investigate one of the methods of helping emotionally handicapped students; in particular, to study the effectiveness of Ellis's Rational-Emotive psychotherapeutic counselling on elementary school children, who have been identified by A Process For In School Screening of Children with Emotional Handicaps by Bower. (1962).

The selection of the specific screening device and the counselling technique used in this study, was governed by the following criteria: (a) the collection of the information and the counselling should be capable of being administered to class size groups, (b) the collection, interpretation of the data, and the counselling should not necessitate direct psychiatric assistance, and (c) the screening processes and the remedial techniques should avoid the use of test items

or procedures which could be regarded as an "invasion of privacy" or as being highly personal or controversial in content.

CHAPTER II

THEORETICAL FRAMEWORK

Ellis's Rational-Emotive Theory

A counselling theory, that satisfied the criterion outlined in the introduction, was formulated by Albert Ellis (1958, 1962). Ellis coined the term rational-emotive psychotherapy or RT for short, for his system of psychotherapy.

The theory of rational-emotive psychotherapy may be summarized under the following three major divisions: (a) internalized speech is, or becomes, thought, (b) thought or covert verbal statements produce emotions, (c) disordered emotions, resulting from illogical, irrational covert verbal statements, can be ameliorated by changing the self-verbalizations.

The concept that internalized speech becomes thought is so basic to RT theory that Ellis uses the terms internalized speech, self talk, and thought interchangeably. Ellis (1962) states that, "...thinking is done in the form of words, phrases, and sentences." (p. 50).

Ellis believes that thinking and emotion are very closely related and that emotions, especially the strong sustained variety, are the result of thought or one's own internal verbalizations. Thinking is defined as a relatively calm, impersonal appraisal of a situation, while emotion results from a strong, personal evaluation of some object, person or situation. Thinking processes make maximum use of informational stimuli that are available, while emoting tends to disregard or

shut out portions of environmental information and substitute one's own internalized sentences.

Emotions seem to be of two types; the short term, intuitive, unreflective type which Ellis prefers to call feelings, and the long range, reflective appraisal, which he calls sustained emotions. Short term emotions, or feelings, can exist for short periods of time without thought; but strong, sustained emotions require thought or covert verbal statements. One may experience a short term emotional response as the result of some physical activity, without any cognitive elements, for example being hit on the head. The period of duration of feelings resulting from physical pain coincides with the physical pain. Ellis (1962) maintains that it is, ..."almost impossible to sustain an emotional outburst without bolstering it by repeated ideas." Any sustained emotion, excluding physical pain, is seen as the direct result of some cognitive activity usually in the form of covert verbal statements. For example, the emotional response of anger and hostility at being hit on the head may be sustained by bolstering the physical pain with the following examples of covert verbalizations: "Isn't it terrible that he hit me? He doesn't like me. No one likes me. I am no good. That fellow is a villain. I hope he gets what is coming to him."

Ellis hypothesizes that society indoctrinates its members with several such major fallacious ideas, with which the individuals keep reindoctrinating themselves in an unreflective, auto-suggestive manner.

Consequently these self-verbalizations actualize overt behavior that is self-defeating and neurotic. Ellis (1962, p. 61) lists the following eleven irrational ideas which form the "basis of emotional aberration in our society:

- (a) The idea that it is a dire necessity for an adult human being to be loved or approved by virtually every significant other person.
- (b) The idea that one should be thoroughly competent, adequate, and achieving in all possible respects if one is to consider oneself worthwhile.
- (c) The idea that certain people are bad, wicked, or villainous and that they should be severely blamed and punished for their villainy.
- (d) The idea that it is awful and catastrophic when things are not the way one would very much like them to be.
- (e) The idea that human unhappiness is externally caused and that people have little or no ability to control their sorrows.
- (f) The idea that if something may be fearsome one should be terribly concerned about it and should keep dwelling on its possibilities.
- (g) The idea that it is easier to avoid than to face certain life difficulties and self responsibilities.
- (h) The idea that one should be dependent on others and needs someone stronger than oneself on whom to rely.

- (i) The idea that one's past history is an all important determiner of one's present behavior and that because something once strongly affected one's life, it should indefinitely have a similar effect.
- (j) The idea that one should become quite upset over other people's problems and disturbances.
- (k) The idea that there is invariably a right, precise and perfect solution to human problems and that it is catastrophic if this perfect solution is not found."

Ellis states that the individual's repeating to himself his early acquired irrational beliefs are the basic causes of most emotional disturbances. "For once a human being believes the kind of nonsense included in these notions he will inevitably tend to become inhibited, inert, uncontrolled or unhappy. If, on the other hand, he could become thoroughly released from all these fundamental kinds of illogical thinking, it would be exceptionally difficult for him to become intensely emotionally upset, or at least to sustain his disturbance for any extended period." (Ellis 1962, p. 89).

Feelings of sin, guilt or blame which result from these irrational beliefs are seen as the essence of virtually all emotional disturbances. The internal verbalizations of the guilt ridden self blaming person usually follows the sequence: "I did this terrible act, it was wrong, I am to blame, I am guilty. I am a worthless sinner, I must be punished." These internalized sentences produce intense anxiety,

hostility, dependency and feelings of worthlessness.

Since the emotional disturbances are seen as being produced and maintained by covertly verbalizing these fallacious ideas then it can be argued that emotions are not affected by external events but rather by one's own internalized sentences. Then it would follow that one could modify or change emotions by changing the internalized verbalizations, which caused the emotions in the first place. Thus in the previous example it was not being hit on the head that caused the sustained emotional disturbance but rather the irrational statements that were made. The following self verbalizations could have been substituted: "It was too bad that he hit me, but it doesn't hurt now. I have my own self-respect. It is not necessary to be liked by this fellow." With sentences such as these the episode would have soon been forgotten with no sustained emotional upset.

Ellis (1962) does not believe that all emotions should be, or are capable of being controlled or changed. He sees fits of anger or fear, resulting from sensorimotor processes, love and other similar feelings to be biologically rooted and hence of a beneficial nature to man. His major concern are the "intense and sustained negative emotions, such as enduring fear and strong hostility." (p. 53). He sees these strong sustained emotions as being the result of stupidity or ignorance and should be eliminated by the application of knowledge and straight thinking.

In summary, Ellis states that the, "...central theme of RT is that man is a uniquely rational, as well as a uniquely irrational, animal; that his emotional or psychological disturbances are largely a result of his thinking illogically or irrationally; and that he can rid himself of most of his emotional or mental unhappiness, ineffectuality, and disturbance if he learns to maximize his rational and minimize his irrational thinking." (Ellis 1962, p. 36).

Ellis's Rational-Emotive Therapy

If the hypothesis that emotions are largely a result of covert verbal statements has any validity, then it follows that one can control emotions by controlling these covert verbal statements. Thus disordered emotions can be ameliorated by changing one's thinking. Hence the psychotherapist's main goal is to "induce the patient to internalize a rational philosophy of life just as he had previously internalized the irrational beliefs." (Ellis 1962, p. 95)

Rational emotive therapy emphasizes a general, global philosophy rather than specific attitudes or cures. The therapist attempts to assist the patient to rid himself of his illogical, irrational, self-defacing verbalizations and to indoctrinate a more logical, rational, self-enhancing set of self-verbalizations. Thus a more permanent cure may be affected. The patient becomes a more self regulating individual, he can effect his own adjustments instead of depending upon the therapist to solve each new problem that he may encounter.

The technique consists of demonstrating that the negative feelings of anger, fear, depression, worthlessness, anxiety and guilt, etc. do not arise from external situations but from the patient's present irrational attitudes; his internal verbalizations. Ellis (1962, p. 126) illustrates this concept to his patients by using the "A-B-C theory of human personality." If A is a derogatory remark expressed by someone

significant to the patient and C is the unpleasant emotional response, then the patient assumes that A causes C. However, Ellis emphasizes, this is not the case. The unpleasantness is caused by B, what the patient says to himself as a result of A. The B responses usually take the form of, or are similar to, the following: "It's awful that they don't like me. How can they do this to me? How terrible they are. I can't stand the way they treat me. It's terrible that I can't do this. I am no good."

In therapy the patient is then taught to observe what he says to himself in various situations. After he understands that his covert self verbalizations are the source of his problem, he is urged to substitute a more logical, rational set of self verbalizations. The questions are posed: "Why must I be loved? Why should they approve of me? Not being approved or loved by others might be inconvenient but it can hardly be terrible or catastrophic." The patient learns to change his self verbalizations when he is unaccepted, unloved by others or fails at some task.

The patient must learn not to say sentences that cause him to feel sinful or guilty or self-blaming about the actions for which he may have been responsible. These guilt feelings can be resolved only if the patient has internalized the philosophy characterized by the sentences: "I have done this erroneous deed or mistake, now how can I learn from this and not commit it again?" A healthy personality can

accept and like himself in spite of limitations, mistakes and wrong-doings.

Ellis (1962, p. 58) summarized his rational-emotive therapy by stating that "the therapist should keep unmasking the patient's past and especially, his present illogical thinking or self-defeating verbalizations by (a) bringing them forcefully to his attention or consciousness, (b) showing him how they are causing and maintaining his disturbance and unhappiness, (c) demonstrating exactly what the illogical links in his internalized sentences are, and (d) teaching him how to re-think, challenge, contradict, and reverbalize these (and other similar sentences) so that his internalized thoughts become more logical and efficient."

The goal of RT is to: (a) internalize a logical system of self-verbalizations, (b) to stop blaming self and others and, (c) to accept one's self in spite of inherent limitations, mistakes and wrong-doings.

CHAPTER III
SUPPORTING THEORY AND RELATED RESEARCH

Pavlov's Second Signaling System

A possible basis for Ellis's theory, that covert verbal statements regulate human emotions can be found in Pavlov's second signaling system. The self-verbalizations in Ellis's theory may be interpreted as signals of the second signaling system in Pavlov's terminology.

In Pavlov's classical conditioning the physical stimuli which couple or link with or produce the response, are known as signals of the first signal system. Not as well known but more relevant for the present study is Pavlov's second signaling system.

When Pavlov considered the problem of speech signalization, he put it on a completely new level and advanced the idea of a special "second signal system". He stated that speech introduced a new principle in higher nervous activity, that of abstracting, generalizing and synthesizing the signals coming in from the external environment. Words "stand for" or "signal" the physical stimuli of the "first signal system". He stated that: "For man, the word is just as real a conditioned stimulus as any other that he has in common with animals, but at the same time the comprehensiveness of words is such that they cannot be compared... with the conditioned stimuli of animals. As a result of an adult man's

previous life experiences words are connected with all external and internal stimuli, that reach the cerebral hemispheres; words signalize and stand for all these, and can therefore evoke all the actions and reactions in the organism that the stimuli themselves produce." (Pavlov cited by Simon. 1957, p.65).

The formation of unconditioned reflexes in animals is an example of a bond formed wholly within the limits of the first signaling system. The traditional example of this bond is the animal salivating in response to food. This unconditioned response of the first signaling system may be diagrammed as follows:

$$S_1 \longrightarrow R$$

Where S_1 - is the unconditioned stimuli

R - is the response

→ - is the bond.

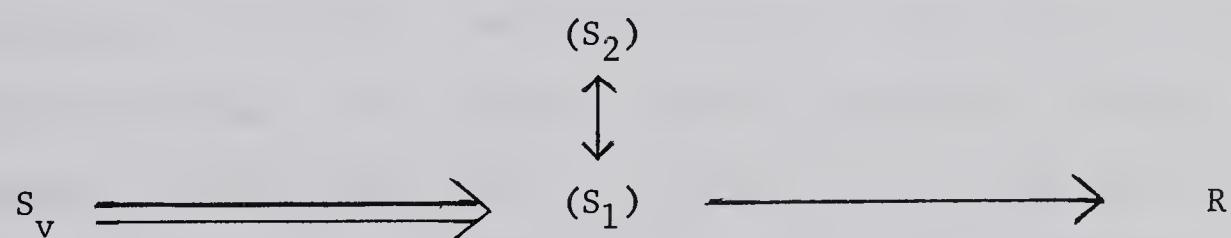
Also wholly within the first signaling system is the conditioned reflex. The animal may also learn to respond, salivate to a stimulus, the ring of a bell, which occurs in conjunction with the original stimulus, the food. In this case the food is associated or called forth by the conditioned stimulus, the ringing of the bell. This may be diagrammed as follows:



Where S_2 - is the conditioned stimuli

\longleftrightarrow - is the signaling symbol

Animals, operating within the first signaling system, learn to fear only actual, real, noxious stimuli that can produce physical feelings. However, human beings, with a well developed system of language and the symbol producing facility that goes with language, are able to communicate with others and more importantly with themselves in a manner that is much more complex than the signaling of other animals. For man, words alone can stand for or signal the physical stimuli of the first signaling system. This higher level signaling system Pavlov labeled the second signaling system. The sequence of signals in the second signaling system may be diagrammed as follows:



Where S_v - verbal stimuli of the second signaling system

$()$ - recalled or remembered

$\overline{\overrightarrow{}}$ - stand for or signal the physical

Animals, operating within the first signaling system, regulate their behavior largely because their sensations or physical feelings are rewarded or punished. On the other hand, man may also be rewarded or punished with purely verbal stimuli either imagined or defined. Man therefore becomes fearful of purely verbal stimuli. He learns to fear words, thoughts and gestures of others and also, in Ellis's view, to fear their own self signaling and self-talk. Virtually all neurotic fears are purely defined fears which are kept alive by internal verbalizations.

Interrelationships Between Two Systems

Russian research provides a wealth of experimental evidence relevant to the interrelationships between the first and second signaling systems. The interrelationships between the two signaling systems refers to the effectiveness of the word (signal of the second signaling system) in replacing unconditioned as well as conditioned stimuli (signals of the first signaling system) in the production of physiological responses. For example, Kapustnik (reported in Simon, 1957) produced a conditioned reflex in children to the sound of a bell and then replaced the conditioned stimulus by the spoken word "bell." Kapustnik emphasized the fact that this conditioned connection to the word "bell" formed immediately, and evoked the same response as the sound of the bell.

Luria and Vinogradova (1959) reported experiments in which a constriction of the bloodvessels of the finger was conditioned to the word "cat". In normal children eleven to twelve years of age, words with phonetic resemblance to the critical word cat did not evoke the vascular reaction. However words related meaningfully to the signal word, such as animal, elicited a constriction of the blood vessels of the finger. Thus it is seen that the second signaling system reacts to the meanings associated with words rather than with the pure sound of the word.

Pshonik's (as reported in Platonov 1959, p.18) plethysmographic studies have shown "that the reaction to the usual conditional stimulus (bell-constriction of vessels) could later be obtained in response to the verbal warning, "I am going to ring". Here the verbal stimulus addressed to the second signal system produced the identical physiological response as a conditioned physical response from the first signaling system.

Winn (1961) reported evidence that it was possible to establish conditioned reflexes of the heart, blood pressure and the pupil of the eye by means of auto-suggestion, by a command from the subject himself.

Speech As A Regulator Of Human Behavior

Luria presents a volume of scientific evidence supporting Ellis's belief that internalized speech regulates human behavior. Luria considered the following major aspects relevant to the study of speech as a regulator of human behavior: (a) the definition of the sequential developmental stages from the total inability of verbal commands to control human behaviour to the stage whereby human behavior comes to be controlled by internal verbalizations, and (b) the role speech plays in the formation of mental processes.

Luria (1961) outlined the stages of development through which speech becomes the means by which man becomes "the highest self-regulating system". The earliest stage is characterized by the inability of speech to regulate a child's behavior. In the second stage the verbal command from the adult is capable of initiating movements but is ineffectual in arresting the action once it is commenced. Luria described an experiment in which children eighteen to twenty-four months were asked to squeeze a rubber bulb. The children were able to follow these directions but when asked to cease movements they were unable to do so. Thus it was observed that the direct inhibitory function of speech, once a motor action has already begun was as yet not developed.

The experiment was then varied so that when the light came on the subject was directed to press the bulb. This set of verbal instructions proved to be more complex than the simple direct verbal direction just to

squeeze the bulb. This complex set of verbal commands required a synthesis of two verbal elements which resulted in "complete irradiated inhibition and the discontinuance of all motor reactions". (Luria 1961, p. 56)

Having failed to inhibit the child's squeezing of the bulb by inhibitory verbal instructions Luria attempted to control the physical behavior by having the child perform two simple actions in succession. The child was instructed to squeeze the bulb at the flash of the light and then to quickly remove his hand from the bulb and place it on his knee. Gradually the distance that he had to move his hand after pressing the bulb was reduced until eventually the intervening movements were omitted. Having learned to inhibit the first response, pressing the bulb, through performing the second action, the child was now able to cope with a task that he had previously found impossible. Verbal instructions, previously ineffective, could now prohibit diffuse motor responses, due to the inhibitory functional influences of the intervening movements.

Luria then set out to inhibit the diffuse motor reaction through the inhibitory function of speech, through a system of "feed-back" afferentations. A system of "feed-back" impulses was used to signal the end of the action, and thus eliminate the irradiated motor impulses. All the conditions of the experiment remained unchanged, but the child was instructed to press the bulb when the light came on and thereby to put out the light. The extinguishing of the light signalized the completion of the required action. Luria concluded that he had "obtained the first and

simplest model of a voluntary movement in a very young child". The pressing of the bulb was initiated by verbal commands and stopped by visual signals which resulted from the child's own movement.

This first voluntary action of the child was regulated by an external signal which rose from the movement of the child himself. The next problem was whether the self-regulation could proceed from the child itself without the help of any external regulating signal. At the age of three years the child's speech was developed to such a stage that it was possible to regulate the child's motor responses by continual verbal reinforcement, from the experimenter. Each time the light came on the experimenter said, "Go!" and the child responded with only one squeeze on the bulb. Thus at the age of four a stage is reached where speech has acquired an inhibitory property.

The next problem was whether this regulatory function could be assumed by the child's own speech. The experiment was organized in such a way that self-regulation would proceed from the child itself without the help of any external regulating signal. The child was instructed to say, "Go" and to press the bulb. The child of three to three and a half was unable to inhibit his motor reactions by his own verbalizations. However, the child of four, especially those whose speech had been thoroughly trained, reacted to each signal with the word "go", and were thus able to inhibit the motor response, pressing the bulb.

Here the child had replaced the regulating action of an external signal, the extinguishing light, by his own verbal command "go". At the

final stage at a later age, internal verbal connections, generalizations or rules, created by training proved adequate for the regulation of the child's motor reactions.

Luria (1959) proposes that the acquisition of speech not only extends the content of a child's thought processes, but also involves a re-organization of all the child's basic mental processes. The word thus becomes a tremendous factor in isolating, abstracting, generalizing and relating the innumerable signals of the first signaling system. Associations or links are formed much more easily and quickly and are more permanent when they are made under the influence of the naming function of speech. Luria (1961) demonstrates this phenomena with the following experiment. Children 12 to 30 months were given red and green boxes, the red boxes containing sweets while the green boxes were empty. It proved very difficult for these children to select the appropriate boxes. The correct process was easily extinguished and had to be worked out each day. However, when the colors were named the significant cues stood out permitting the formation of links three times as quickly and immeasurably stronger.

Vygotsky (reported in Simon 1957, p. 116) carried out an experiment which also demonstrated the function of speech in problem solution. Every time the child of four to five years of age was confronted with a problem (modeling plasticine) he performed the action in silence until he met some difficulty. As soon as he was presented with some difficulty

(by hiding a piece of plasticine) his activity at once began to be accompanied by speech. The child stated the situation that had arisen, took from it "verbal copy" and then reproduced those connections of his past experience which would help him out of his present difficulties. He emphasized that this was not affective "egocentric speech" as Piaget (1926) had thought but the inclusion of speech to mediate behaviour by the mobilization of verbal connections which help to solve difficult problems.

Vygotsky (1962) concluded that egocentric speech was a stage of development preceding inner speech. Inner speech does not merely accompany the child's activity, it serves mental orientation, conscious understanding, it helps in overcoming difficulties, it is speech for oneself, intimately and usefully connected with the child's thinking.

Vygotsky like Luria, also stressed the social origin of the higher mental processes. He saw human development as having its source in the verbal communication between child and adult. Subsequently speech becomes a means whereby the child organizes his own experiences and regulates his own actions. "A function which is earlier divided between two people later becomes a method of organization of the activity of a single individual". (O'Conner 1961, p. 165)

Platonov's Word Therapy

Platonov (1959) presents an example of how the preceding theory is applied in therapy. Platonov's therapy may be considered as an application of Pavlov's theory that "the word is as real a conditioned stimulus as any other stimulus and at the same time is more all embracing than any of the other". Platonov's therapy consists of reassurance, explanation, persuasion and verbal suggestion on the conscious level. His treatment by suggestion on the conscious level is based on the "fact" that many of the neurotic phenomena are due either to autosuggestion or unintentional suggestion. Hence it is necessary to employ countersuggestion or therapeutic suggestion to remove the distressing symptoms. The counter suggestion eliminates the pathological bonds and establishes new bonds, by means of a "critical re-elaboration" of the entire situation.

Platonov states that more complex therapeutic methods, verbal suggestion to a patient in a drowsy state, 'hypno-suggestive therapy' may be necessary in cases where the neurotic fixation is under a deep inhibitory state of the cerebral cortex.

Platonov reports that his system of suggestive psychotherapy affects a "real aid" in seventy-five percent of all his cases.

While Platonov viewed autosuggestion as being a possible cause of disorders he failed to identify change in autosuggestion as being central to psychotherapy as does Ellis. Platonov saw reassurance, explanation and verbal suggestion as being critical in psychotherapy.

Summary

The preceding theoretical discussions and experimental research are viewed by the author as providing a sound basis for Ellis's Rational Emotive Therapy.

Pavlov provided the basis for the discussions with his theory of the "second signaling system". He saw the word as a signal of direct stimuli; thus the word is seen as being capable of producing a response identical to the response produced by direct stimuli in the past. Subsequent Russian psychologists have provided the experimental evidence to determine the relationships between the two signaling systems.

Luria's demonstration that speech regulates human behavior provided the basis for Platonov's word therapy, in which the word, in the form of counter suggestions, is seen as being capable of eliminating pathological bonds formed by suggestion or autosuggestion.

Ellis believes that since emotional problems are maintained by autosuggestion it is necessary to use autosuggestion in their elimination. Ellis's theory is seen not only as a therapy effective in eliminating emotional disturbances but also as a preventative psychotherapy. For once an individual has grasped the fundamental concepts of RT it is possible to gain control of one's feelings and thereby prevent future emotional maladjustment (unhappiness).

CHAPTER IV

EXPERIMENTAL DESIGN

This chapter will describe the testing instruments used, discuss the selection of subjects and their assignment to control and experimental groups, outline the treatment administered to the two groups, and list the hypotheses to be tested.

The Testing Instruments

The testing instruments that satisfied the criteria set out in the introduction was a battery of experimental screening devices, A Process For In School Screening of Children With Emotional Handicaps (Bower, 1962). The battery was administered to all the one-hundred sixty-four students in the five division two classes in an urban school to identify the most poorly adjusted individuals. The battery consists of three different rating scales: Behavior Rating of Pupils, A Class Play and Thinking About Yourself.

Behavior Ratings of Pupils

Behavior Ratings of Pupils is a test that seeks to elicit the teacher's perception of pupil behavior. Each teacher placed the names of all the pupils in his class on an appropriate section of a normal distribution table for each of eight ratings. The ratings ranged from one, positive behavior, to seven, negative behavior, for each of the

eight statements of behavior. The eight statements of behavior follow:

- (a) This pupil gets into fights or quarrels with other pupils more often than others.
- (b) This pupil has to be coaxed or forced to work or play with other pupils. He or she will actively avoid having any contact with classmates.
- (c) This pupil has difficulty in learning school subjects.
- (d) This pupil makes unusual or inappropriate responses during normal school activities. His behavior is unpredictable.
- (e) This pupil works extremely hard in learning school subjects to the exclusion of any other interests or activities. This pupil pours all his energies into school work.
- (f) This pupil behaves in ways which are dangerous to self or others. This pupil will get into situations in which he or she may be hurt or frightened.
- (g) This pupil is unhappy or depressed. He or she may cry easily, be inattentive, or daydream.
- (h) This pupil becomes upset or sick often, especially when faced with a difficult school problem or situation.

This simplified Q-sort system gives each student eight individual ratings. The total score for each student is then the sum of the eight individual scores. High total scores indicate that the teacher observes a great deal of maladjusted behavior.

A Class Play

A Class Play is a peer rating instrument. It contains descriptions of twenty hypothetical roles in a play, with instructions directing each pupil to choose a classmate who would be most suitable and natural in each of the roles. The roles, or parts, follow:

- (a) A true friend.
- (b) Somebody who is often afraid and who acts like a little boy or girl.
- (c) A class president.
- (d) Somebody who is stuck-up and thinks he's better than everyone else.
- (e) A girl to act the part of a teacher of small children.
- (f) A mean, cruel boss.
- (g) A boy to act the part of a team captain, someone good in sports and liked by all.
- (h) A mean, bossy sister.
- (i) Someone who is smart and usually knows the answer.
- (j) A person who often gets angry over nothing and gets into lots of arguments.
- (k) Someone who is jolly and doesn't cause any trouble in class.
- (l) A bully who picks on smaller boys and girls.
- (m) Someone who is liked by everybody and who tries to help everybody.

- (n) A very lazy person.
- (o) A very fair person who plays games fairly.
- (p) A nice pest, someone who often gets into trouble, but is really nice.
- (q) Someone else, besides yourself, who could direct the play.
- (r) A smaller, younger child who is always falling down and getting hurt.
- (s) A school nurse or a doctor.
- (t) Somebody who seems always to be late for school.

By counting the number of times a pupil is picked for each of the roles in the play, and then counting the number of times each pupil is chosen for the even numbered (negative) roles, a percentage is obtained indicative of the positive or negative perception of each pupil by his classmates. A high percentage indicates a high degree of maladjustment.

Thinking About Yourself

Thinking About Yourself is designed to elicit from the pupil himself an intra-self measure of the relationship between his perception of himself as he is and as he would like to be. Thinking About Yourself contains forty statements which are briefly descriptive of a boy or a girl. A sample of these statements follow:

- (a) This person enjoys teasing.
- (b) This person does not have to go to school.

- (c) When this person grows up, he or she will be a teacher.
- (d) This person studies hard at home.
- (e) This person plays games whenever possible.
- (f) This person goes to the dentist.
- (g) This person has a light in his room all night.
- (h) This person plays with many different children.
- (i) This person goes to bed without being told.
- (j) This person daydreams a lot.
- (k) This person will be rich and famous.

Each statement is followed by two questions: "Are you like him?" and "Do you want to be like him?" The pupil's answer to each question can vary along a scale that extends from: "Oh, very much!", Well, yes, I don't think so.", to "No, no a thousand times, no!" The test is scored by computing the degree of difference between the answers to the two questions, thereby obtaining a measure of the distance between "perceived self" and "wanted self" on each item then summing these discrepancies for all the items. High scores are assumed to indicate a great amount of intra-self dissatisfaction. Low scores indicate very little intra-self dissatisfaction.

Since the screening tests are in an experimental stage there is, as yet, no statistical evidence as to their validity and reliability. However the authors present some data for an earlier, similar form of the present battery.

To provide evidence on the validity of the earlier but similar teacher ratings, the ratings of 100 screened students were compared, on each of the eight items, with 100 unscreened pupils in the same classes. On all but one of the eight items, there was a significant difference between the two groups. The authors also reported a 1958 study in which 169 boys and 56 girls were identified as emotionally handicapped by having at least two out of three extreme negative ratings on the screening instruments. The identified students were then given individual psychological examinations by clinical psychologists. Of the 225 boys and girls so screened 90 percent were confirmed by clinical study to have moderate to serious emotional problems. The authors conclude that, "... some validity is imputed for the test as a whole." (Lambert, 1961, p. 36)

A test-retest, on the class play, after three weeks resulted in a reliability of .88 for 180 pupils.

"Although a great deal of effort has been spent on the Self Perception instruments, their inclusion in the battery still is largely the result of faith that they will lead ultimately to more precise observation of the child's perception of self." (Lambert 1961, p. 30)

A Sociometric Device

A sociometric device was also administered to all of the students. Each student was asked to list the two students in his class with whom he would like to work or his two best friends. Each student was also asked to list the two students with whom he would not wish to work or whom he did not like.

Average Academic Ratings

The average academic ratings of the previous June report card were compared with the June report immediately following the study.

The screening battery and the sociometric questions were administered to all one hundred sixty-four students before and after the treatment.

Selection of Subjects

The subjects for the present study were selected on the basis of their standings on the three rating scales of A Process For In School Screening of Children With Emotional Handicaps. All of the one hundred sixty-four students were ranked from highest score to lowest score on each of the three rating scales: Pupil Behavior Rating Scale, A Class Play and Thinking About Yourself. The five students who received the highest scores on any two or three of the rating scales were indicated as being the most poorly adjusted and were therefore

selected as subjects for this study. Since a number of students received identical scores it was necessary to select a total of thirty-three subjects rather than the anticipated twenty-five subjects.

The thirty-three subjects thus selected were randomly assigned to an experimental and a control group. Three subjects had such irregular attendance at the counselling sessions that they were considered as drop outs. This left fourteen, eleven boys and three girls, in the experimental group and sixteen, twelve boys and four girls, in the control group.

The subjects ranged in chronological age from nine years six months to twelve years four months with a mean chronological age of eleven years seven months. The I.Q. ranged from 90 to 138 with a mean I.Q. of 110.

Treatment

The Control Group

The control group met for a total of fourteen sessions which varied from one-half to three quarters of an hour. The members of the control group observed a number of films and film-strips with no directed discussions. The students were free to carry on normal conversations.

The Experimental Group

The experimental group met for a total of fifteen sessions of approximately forty-five minutes duration. The sessions extended for a period of three and one half months.

The treatment of the experimental group followed the techniques of rational emotive psychotherapy as outlined by Albert Ellis. The therapy was based on the following major aspects of Ellis's theory:

(a) that internalized speech becomes thought, (b) thought or covert verbal statements produce emotions, (c) disordered emotions, resulting from illogical, irrational covert verbal statements can be ameliorated by changing the covert verbal statements. Hence an attempt was made to change the subjects verbalizations at point B of the "ABC theory of therapy."

The initial sessions were concerned with acquainting the subjects with the purpose of the meetings, to help them get along better in and out of school and to be happier, and to demonstrate the free, comfortable and accepting climate in which the discussions would take place.

Anger was the first topic of major concern of the subjects. The views were expressed that anger was a very common, uncontrollable, exceedingly unpleasant emotional response. The author attempted to explain and demonstrate that anger was the result of what one said to oneself and that, as a result, anger was subject to control. Thus they

were encouraged to apply reason at point B, before giving vent to C, the emotional response.

Since it proved very difficult for the students to recall their thoughts, which occurred directly preceding their emotional responses, due to the lapse in time, they were asked to record their emotional responses, their causes, and what covert self-verbalizations intervened the causes and the responses, as soon as possible after their occurrence. This technique proved highly productive.

The following verbatim report is recorded as an example of the therapeutic procedure.

"I was terribly angry because my sister broke my model--I got mad."

"Yes... Why did you get mad?"

"Models cost money and I'm already broke."

"But it is already broken. The anger won't do any good. The anger will not repair the model. This just doesn't make sense. The broken model isn't worth all this anger. We could say to ourself: 'Next time I'll put my things away then this won't happen. This isn't any reason to get angry.'"

As a demonstration of the ability of the subjects to change their self verbalizations the following discussions, which took place a number of sessions subsequent to the above, is recorded.

"It worked."

"What worked?"

"You know when I try to go to sleep and I can't, I get angry and then I can't go to sleep at all. Last night I said to myself that I'm just not going to get upset. If I settle down I'll go to sleep. So I didn't get upset and I went to sleep."

Another strong emotional response reported by all the subjects was one of sin, guilt, or a feeling of utter self-rejection. The typical responses were: "I'm no good. I'm stupid. I can't do anything right. No one likes me." These feelings seemed to be well founded as a result of the indoctrination of the irrational beliefs that Ellis states are so prevalent in our society.

Here it was pointed out that one can have a high degree of self regard even though one is not loved or approved by others. Other people don't hurt us when they say things to or about us. It is when, and only when, we say, "Now isn't that terrible that he doesn't like me", that we make ourselves unhappy.

During the succeeding sessions other feelings were discussed in a similar manner. The subjects frequently assumed the role of the counsellor and explained to their peers that the unhappy emotions were a direct result of what one said to oneself and that if one changed these self verbalizations it would be possible to feel happier.

In summary, the subjects were induced to change their covert self-verbalizations and apply reason at the point following the usual

stimuli for an emotional response. They were also encouraged to become more self accepting in the face of rejection by others.

Hypotheses

In the present study, the effectiveness of rational-emotive psychotherapy was determined by testing the following four main hypotheses:

1. There is no significant difference between the control and experimental group, between the pretest and posttest on the following rating scales of the screening battery:
 - (a) Behavior Ratings of Pupils
 - (b) A Class Play
 - (c) Thinking About Yourself
2. There is no significant difference, between pretreatment and posttreatment, in average academic achievement between control and experimental group.
3. There is no significant difference between the control group and the experimental group, between the pretest and posttest, in the number of (a) like and (b) dislike choices received on the sociometric tests.

CHAPTER V

RESULTS AND DISCUSSIONS

The differences between pre-treatment and post-treatment scores were determined for each subject, on each variable. The average mean difference for each variable for the two groups was then calculated. The "t" test of the average mean differences was applied in order to establish whether any significant change had occurred. The levels of significance prescribed were the .05 and .01 levels. With 28 degrees of freedom the required "t's" for the .05 and .01 levels were, respectively, 2.05 and 2.76. The "F" test was used to test homogeneity of variances.

Table 1 presents a summary of the average mean change in the six variables between pretest and posttest scores for both the control and the experimental groups.

Behavior Ratings of Pupils

The teacher's behavior ratings of pupils showed an average decrease of 3.9 negative choices for the experimental group and an average decrease of 2.9 negative choices for the control group. This difference of 1.0 negative choices between the two groups did not prove to be significant.

A Class Play

The experimental group received an average of 5.9 fewer negative choices by their peers after the treatment period than they had received

Table 1

Average Change in Groups Between Pre-treatment and Post-treatment

Variable	Experimental Group		Control Group		$\bar{d}_1 - \bar{d}_2$	t	F
	n = 14	n = 16	\bar{d}_1	s_1^2	\bar{d}_2	s_2^2	
Behavior Ratings of Pupils	-3.9	62.7	-2.9	76.6	1.0	.33	1.2
A Class Play	-5.9	135.9	3.2	559.0	9.1	1.4	4.11*
Thinking About Yourself	-.4	58.7	-5.6	110.2	5.2	1.5	1.8
Like Choices	.57	5.2	.25	5.8	.32	.4	1.1
Dislike Choices	-.29	2.5	.44	14.1	.73	.72	5.6*
Academic Ratings	.80	82.5	-.25	80.3	1.05	.3	1.0

* Sig. at .01 level

before the treatment. Conversely the control group received 3.2 more negative choices by their peers after the treatment period than they had received previously. However, this average difference of 9.1 peer choices between the groups proved to be not significant. The "F" test was significant therefore the variances were significantly different.

Thinking About Yourself

The control group expressed an average of 5.6 fewer discrepancies between his self-perception as he sees himself and as he would like to be, while the experimental group recorded an average of .4 fewer deviations on the second testing. This difference of 5.2 proved to be not significant.

While this difference of 5.2 was not significant some interesting hypotheses may be attempted in view of the direction of change of the two groups. Bower (1961) views a degree of variance between the perception of self and the ideal self as an indicator of emotional maladjustment while RT theory maintains that this variance between perceived self and ideal self may not be a sufficient condition for maladjustment. In RT terms, if one learns to accept this difference, then no problem exists.

While Thinking About Yourself measures the degree of variance between two ideas, it does not ascertain the significance of this difference to the subjects themselves. In other words an individual may see a wide variation in their perception of themselves as they are

and as they would like to be and still not be emotionally disturbed. In the present study the experimental subjects may have seen a difference between self as is and as they would like to be, however, they may have learned, as a result of RT counselling, to accept this difference. The experimental group was taught to worry less about socially approved customs. They may then be less pervious to self castigating ideas posed in the test than were the members of the control group. On the other hand, the control group, because they need approval desire to see self, as is, and ideal self to be very close. If this hypothesis is true then the whole basis of using this test as an indicator of emotional maladjustment is founded on a false premise and therefore should not be used as an indicator of emotional maladjustment.

Academic Standing

The experimental group experienced an average mark increase of .8 while the control group received an average decrease of .2 marks. This average difference of 1 mark proved to be not significant.

Peer Like

The experimental group showed an average increase of .57 like choices while the control group experienced an average increase of .25 like choices. This difference of .32 peer like choices between the two groups proved to be not significant.

Peer Dislike

The experimental group showed an average decrease of .29 dislike choices while the control group experienced an average increase of .44 negative choices. This difference of .73 between the two groups in peer dislike choices was not significant.

The "F" test was significant therefore the variances were significantly different.

Perhaps the sociometric techniques could have proved to be more discriminative if the choices would have been increased from the two choices which were permitted. It may be that any one individual's first and second choices are rather stereotyped but selections beyond the first two would be more amenable to change. That is, an individual would be very reluctant to perceive any change in his best friends but would be able to discern variations in individuals not so close to them socially.

Some Subjective Observations

In view of the experimental nature of the evaluating techniques an attempt was made to evaluate the program of psychotherapy by soliciting the personal opinions of the teachers and the students relative to the effectiveness of the counselling.

Teachers. The teachers were asked to comment on the emotional adjustment of each student taking part in the project. The author then

categorized these remarks as either representing improvement or no improvement in the child's emotional adjustment. The results are tabulated in Table 2.

Table 2

Teacher's Subjective Evaluation Of Psychotherapy

	No Improvement	Improvement
Experimental	6	8
Control	14	2
Totals	20	10

When the chi-square test was applied to the data the differences between the experimental and control group were found to be significant at the one per cent level.

Subjects. The subjects themselves reported unanimous approval of the sessions. This is a striking result in view of the fact that they had been deprived of their play periods to participate in the counselling sessions. The following comments were recorded:

"I thought they (counselling sessions) were good. I like talking about what we think and do. I get all upset when I get angry and I can't help it. Talk helps -- now I don't get as upset."

"I liked the talks. I liked talking about how not to get mad."

"Talks were very interesting. They taught me things I didn't know about. I get along better now. I just ignore it when people say bad things to me. You know I never thought about that before."

"I learned a lot of things. What I say to myself and things like that. Now I tell myself different things."

"I enjoyed them. They were interesting. I learned not to get mad at Dad. Now I take into consideration other things."

" You feel better when you don't get mad. I still get mad at friends. I guess because I don't remember to think."

The above comments may be interpreted as a certain degree of progression, on the part of the subjects, towards an insight into the part that the self verbalizations play in the causation of emotional reactions. They are verbalizing and are conscious of the fact that the "B", in the ABC Theory", is the cause of the strong feelings rather than "A".

CHAPTER VI

SUMMARY AND CONCLUSIONS

The purpose of this study was to determine the effectiveness of Ellis's Rational-Emotive psychotherapy in counselling emotionally handicapped elementary school children.

A screening device, A Process For In School Screening of Children With Emotional Handicaps (Bower 1962) was administered to the one hundred sixty-four students in the five division two classes of an urban elementary school. The thirty-three students screened by the tests as being the most poorly adjusted individuals, were randomly assigned to a control and an experimental group.

The members of the experimental group were counselled with Rational-Emotive psychotherapy as outlined by Albert Ellis (1962). The central theme of RT is that disordered emotions are produced by one's own covert self-verbalizations and that these disordered emotions may be ameliorated by changing these self-verbalizations.

Since man possesses the capacity of speech and the symbol producing facility that goes with language he is capable of communication with himself in a very complex manner. In our society, man is indoctrinated with the illogical ideas that he must be loved and approved, that he must achieve and be successful, and that when people are wicked they must be severely blamed and punished for their villainy. These basic ideas he keeps repeating to himself until they become his basic

philosophy. Ellis maintains that these illogical ideas are the basic cause of most human emotional disturbances; for once a human being believes the kind of nonsense included in these notions, he will inevitably tend to become inhibited, hostile, defensive, guilty, anxious, ineffective, inert, uncontrolled or unhappy. Thus man does not fear real physical environmental influences but rather the thought of being blamed, of being disapproved, of being unloved, of being imperfect, and of being a failure. He does not feel guilty because of what he does but because he thinks what he does is criminal, he thinks he is guilty. In essence his neuroticism is a direct result of his covert self-verbalizations.

In therapy the patient is taught to become aware of these self-verbalizations as a basic cause of emotional aberrations. He is then urged to replace these self-defeating verbalizations with more rational, logical self-accepting statements. The patient is induced to internalize a rational philosophy of life just as he originally learned and internalized the irrational views of his parents and society.

It was hypothesized that the experimental group would, as a result of the counselling, become in general better adjusted emotionally. It was also hypothesized that an increase in emotional adjustment would be indicated by an improvement in the results of the second administration of the screening devices, the academic ratings and the sociometric devices, over the results of the first administration.

At the conclusion of the therapy sessions the screening devices and the sociometric ratings were readministered. In view of the experimental nature of the evaluating techniques an attempt was made to evaluate the effectiveness of the counselling by subjectively questioning the teachers and the students themselves.

An analysis of the differences of the means for the two groups on each of the variables indicated that the groups did not differ significantly on any of the variables. The counselling treatment administered to the experimental group therefore, as measured by the present criterion, failed to yield the effects postulated by the hypotheses.

However, a number of factors have become evident which would caution the hasty rejection of the theoretical substrata of RT counselling as a result of the hypotheses which were tested. The chi-square test of the teachers' subjective evaluation of the students behavior as a result of the counselling program proved to be significant. The experimental subjects themselves unanimously credited the counselling techniques for the improvement of personal adjustment and feelings of well being which they reported to have experienced. It would also seem significant that all of the changes which have occurred in the tested variables between the pretest and the posttest were in the directions indicated by the theory.

It remains therefore, to consider the possible explanation for these positive results in the light of the lack of statistically significant findings as a result of the screening devices. These factors may

be discussed in terms of, one, the logical validity of the hypotheses as derived from the theoretical orientation and, two, from the adequacy of the criterion, that is the adequacy of the screening devices used.

One of the major difficulties in testing any psychological theory is that logical inferences, lowest-level hypotheses, which are empirically testable are particularly difficult to make. "For the theoretical system to be testable it must contain these lowest-level empirical hypotheses that predict specific empirical events." (Mussen 1960, p. 9) In retrospect, this may have been a major difficulty in this study. That is, the hypotheses that were empirically tested were perhaps not logically derivable from the theory and perhaps the hypotheses tested were too broad and all inclusive rather than specific. The theory stated that the counselling should result in the improvement of self regard. However, the hypotheses formulated resulted in an attempt to test this self regard through rather broad external criterion, namely, the teachers' evaluation of the external behavior, the opinions of the class peers, and the evaluation of the students' academic progress.

Since the objective of RT is an improvement in ones personal feelings of self worth with its abandonment of fears and lack of regard for evaluation of self by others it may logically be assumed that increases in this dimension may be totally isolated from externally observable responses. Therefore it follows that ratings by teachers and peers would be superfluous as a measure of self feelings.

However, on the other hand, if in fact increases in emotional adjustments, as a result of counselling, are discernable and are thus measurable in terms of external behavior then it is left to consider the adequacy of the testing devices used. Since A Process for In School Screening of Children With Emotional Handicaps is only a screening device it does not purport to be more than a device which is helpful in the selection of candidates for referral for more specialized diagnostic procedures. Further, as Bowers (1961) has emphasized the characteristics, the validity and the reliability, of the instruments are only slightly known and are thus published for use as experimental instruments only.

At the present time the broad field of human emotional-maladjustment is fraught with unknown variables. As always, a major difficulty in designing and completing a scientific study is one of criteria. This is a particularly crucial problem in a study of human emotional adjustment because there is no group of emotionally handicapped children identified against which to validate the rating scales. However, despite these problems, educators must work with these handicapped children. Therefore this study was seen as an attempt to 'get on with the job' despite the absence of data in support of the procedures employed.

Subjective observations seem to indicate that the techniques used may be capable of satisfactory implementation in our schools.

The parents expressed no hostility towards the program, the children themselves reported unanimous approval of the program, and the testing procedures did not present a burden to the teachers. However, the following two crucial questions were left unanswered by this study; were these identified children in reality emotionally handicapped? and did the counselling procedures in fact produce any behavioral changes in these children? It is left to future research to ascertain answers to these questions.

In retrospect a number of possible alternative procedures which could have been taken in the present study will be suggested together with a clarifying statement of the reasons for the procedures that were followed.

Perhaps, other better known paper and pencil instruments could have been administered to the subjects after their identification by the screening device. However significant patterns of behavior in children, inability to learn, inability to maintain satisfactory interpersonal relationships with peers and teachers, inappropriate behavior, pervasive moods of unhappiness and tendencies to develop physical symptoms, seem to be best judged by teachers using their professional training, and their long term observations of the children. The problem then seems to be one of perfecting teacher rating scales. To this end a number of techniques were incorporated into the rating scales to assist the teacher in arriving at a valid

rating. Each item of information elicited was in the form of a statement related to a directly observable behavioral response characteristic of maladjusted behavior. Some comparisons were permitted between the various ratings in view of the fact that the teachers' judgments were forced into a normal distribution. Future ratings could be improved by eliminating to some degree rater bias and halo effect by obtaining ratings of each student from a number of different raters. This would be possible in schools which employ a degree of specialization where a number of different teachers become acquainted with the students. However there is a danger here in that the duration of observations of each individual student by each teacher diminishes thus reducing the validity of the judgments.

Perhaps standardized achievement test scores, rather than the evaluations of the various teachers would have been a more valid indicator of academic change. However it was hypothesized that the teachers' evaluations would be more all inclusive, that is: students' attitudes, work habits, and abilities would have been considered rather than a pure measure of academic achievement. In the final analysis these more generalized characteristics, not the specific academic achievement, was the object of RT counselling. It was also assumed that improvement in attitudes and work habits would be discernible long before changes would become evident on achievement test scores. Here, as with the rating scales of pupil behavior, a number of teachers

rating the same students would improve the validity of the ratings.

Perhaps, in order to test the effects of counselling procedures on academic success, it would be necessary to follow up the academic results in the years following the counselling. It would also be necessary to interpret these results in terms of the students intellectual capacities.

The subjective ratings of the students' emotional adjustment by the teachers was added to the battery in an attempt to extend the formal behavior rating scale. This was an attempt to determine whether other types of behavior were significant to teachers and should therefore be included in the teacher rating scales.

Rating scales could have been prepared for the teachers rather than the open ended procedure that was employed, however these subjective ratings by the teachers were purposely left unstructured for two reasons: first, the teachers had previously rated all the students on a structured scale and secondly, a wider global assessment of the students' emotional adjustment was desired. Here the teachers were free to mention any factor that they would consider to be of importance rather than have the responses restricted to prepared statements. However the teachers did not verbalize new behavior patterns. The responses were more generalized in the form of a global assessment of the student's emotional adjustment.

A pertinent problem in a study of procedures designed to alter human emotional adjustment is one of time. At best a counselling

procedure which attempts to alter basic human behavior is a long term project. It is well understood that any test of a counselling procedure of such a short duration as was employed in this study is deemed inadequate. However, as was previously pointed out, it is better to try with certain scientific weaknesses than not to act at all.

In view of the preceding discussions any conclusions, relevant to the adequacy of the counselling procedures, based on the results of this short term study using as criteria these screening devices are only tentative and hypothetical.

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